

REMARKS

Claims 1, 3-5, 7, and 10-21 remain in this application. Applicant respectfully requests re-examination.

Claim 1-3, 6, 8 and 9 were rejected under 35 U.S.C. § 102(b) as being anticipated by a European Patent (EP 0135595). Applicant respectfully traverses.

The European Patent (EP 0135595) is directed to a method for manufacturing a floor covering in the form of a single-layer or multilayered product for sport grounds and sports halls. The floor covering is comprised of rubber granules, "Gummigranulat," or rubber waste, "Gummiabfällen," or a combination of both, combined with a prepolymer bonding agent (page 3, lines 1-3). The rubber and bonding agents are then pressed into continuous sheets until the sheet hardens. The sheet is then cut into sections and rolled up for distribution (page 3; Fig 1). The European Patent does not disclose or contemplate a combination of butadiene rubber granules and peelings or buffings.

The European Patent discloses that either rubber granules or rubber waste, or a combination, may be utilized in order to reuse available material, particularly old rubber "Altgummi" (page 5, lines 11-33). The European Patent does not disclose any preference for rubber granules, rubber waste, old rubber, or new rubber or any particular combination because the European Patent does not care. The compression process utilized (page 3, lines 18-31; Fig. 1) forms the product desired regardless of the physical properties of rubber granules or rubber waste or the amounts used. In the European Patent, a floor covering composed entirely of rubber waste will correspond to a floor covering composed entirely of rubber granules or any combination of the two. The European Patent does not disclose or contemplate that the

properties of its floor covering are related to the proportion of rubber granules and rubber waste used.

Furthermore, the European Patent does not disclose or contemplate providing a combination of “Gummigranulat” and “Gummiabfällen” that will create a porous floor covering. Any variation that might occur in the combination of “Gummigranulat” and “Gummiabfällen” would not be for the purpose of adjusting the floor covering’s porosity, but would depend on the availability of the components.

Moreover, the European Patent teaches the manufacture of a water impervious floor covering, completely opposite to the porous floor covering of the present invention. The base layer under the floor covering of the European Patent is a foundation of sand, gravel, or concrete (page 12, lines 19-31). Individual sections of the floor covering are joined with plastic strips and glued together (page 15, lines 3-18). The European Patent teaches a water impervious floor covering to prevent moisture from seeping down to the foundation of concrete, to be trapped between the plastic strips and concrete, causing wear and mold beneath the floor covering.

The present invention, on the other hand, is directed to a porous base layer composed of a variable combination of butadiene rubber granules and peelings or buffings, and a first binder. The combination of granules and peelings or buffings is varied in quantity relative to one another to increase or decrease the porosity of the base layer.

The European Patent does not show, teach, or contemplate a mixture of butadiene rubber with rubber peelings or buffings. The European Patent does not show, teach, or contemplate a variable mixture of butadiene rubber with rubber peelings or buffings. Furthermore, the European Patent teaches a water impervious floor covering, not a porous floor covering.

Claim 1 recites “a porous base layer of a combination of butadiene rubber granules and peelings or buffings, and a first binder, the combination of butadiene rubber granules and peelings or buffings being varied in amount relative to one another to increase or decrease the porosity of the base layer; and a wear layer of ethylene propylene diene monomer (EPDM) and a second binder on top of the base layer.”

Claims 2, 6, 8 and 9 have been cancelled without prejudice.

Claim 3 depends from and further limits claim 1. Claim 3 is patentable over the European Patent for at least the same reasons advanced above for claim 1.

Applicant respectfully requests that this rejection be withdrawn.

Claims 1-3, and 6-14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over *Blythe* (US 6,818,278) in view of *Byrne* (US 5,396,731). Applicant respectfully traverses.

Blythe is directed to construction materials suitable for use as a wearing course for children’s play areas, athletics, and horse riding. *Blythe*’s wearing course is composed of thermoplastic elastomer particles bound in a liquid binder. *Blythe* discloses that the thermoplastic elastomer particles in the composition are bound in direct contact with one another (column 2, lines 39-55). *Blythe* specifies that the particles have the shape of “angular granules” in order to bind properly in direct contact with one another (column 2, lines 39-55). *Blythe* does not disclose a combination of butadiene rubber granules and peelings or buffings. Moreover, *Blythe* does not disclose a porous base layer. *Blythe* does not contemplate a variable combination of butadiene rubber granules and peelings or buffings to vary the porosity of a base layer.

Byrne (US 5,396,731) discloses a mulch pad for use around trees composed of rubber granules, buffings, and fibers from used tires, a curable binder, and coloring. The mulch pad 10

is designed to be flexible, so that it can be shaped and placed around a tree 12 through a pre-cut slit 18 (column 3, lines 67-68; column 4, lines 1-16). The pad is composed of rubber granules from used tires and rubber buffings combined in a latex or urethane binder (column 3, lines 17-27). The mulch pad 10 is not made of materials that could be utilized as a sidewalk. The mulch pad 10 is not designed to support foot and bicycle traffic.

Byrne does not disclose or contemplate a combination of butadiene rubber granules and peelings or buffings. *Byrne* does not disclose or contemplate a variable combination of butadiene rubber granules and peelings or buffings. *Byrne* does not disclose or contemplate a chosen ratio of butadiene rubber granules and peelings or buffings. *Byrne* has no concern at all for varying the proportion of rubber granules and rubber buffings to increase or decrease the mulch pad's porosity while maintaining its structural integrity for foot and bicycle traffic.

The tree well skirt or sidewalk of the present invention contemplates adjusting porosity and firmness of the base layer by varying the proportion of butadiene rubber with rubber peelings and buffings. Varying the proportionate mixture of butadiene rubber with rubber peelings or buffings is not a concept that could be derived from experimentation with *Byrne's* disclosed material.

Neither *Blythe* or *Byrne* disclose varying the elements of the combination of butadiene rubber granules and peelings or buffings to increase or decrease the porosity of a base layer of a sidewalk. Even if these two references could be properly combined as suggested in the office action, the combination would still not show or contemplate the present invention.

None of the above-mentioned references utilize a variable combination of butadiene rubber granules and peelings or buffings. Additionally, the present invention could not be derived from experimenting with the materials and combinations taught in *Blythe* or *Byrne*. It

simply would not be obvious to a person of ordinary skill in the art at the time the invention was made to develop a structure for use as a sidewalk by combining the materials utilized in a wearing course for a children's play area (*Blythe*) with a mulch pad (*Byrne*). Neither *Blythe* or *Byrne* are concerned with a structure that is both porous, and firm enough to be used as a sidewalk.

Claims 3, 7, and 10-14, depend from and further limit claim 1. These claims are also patentable for at least the reasons stated above for claim 1.

Applicant respectfully requests that this rejection be withdrawn.

In a related copending application, USSN 11/523,126 several prior art references were cited which applicant brings to the attention of the Office here.

Weinberg et al. (US 3,894,686) is directed to a railroad crossing structure comprising flexible pads 15, 16, 17 situated between segments 18, 19 of a paved roadway. The pads are placed over a ballast base 14 (column 3, lines 42-46). The pads may be made of a base layer 28 and a wear layer 32 (column 2, lines 45-65). The base layer 28 is cast from a composition which is "an admixture of comminuted scrap rubber with a curable liquid resin composition" (column 3, lines 38-41). The wear layer 32 is cast over the base layer, from a composition which is "an admixture of finely-divided rubber in a curable liquid resin composition" (column 4, lines 3-7). The finely-divided rubber in the wear layer may be composed of "[f]ine rubber buffings or finely-ground rubber from old tires and substantially free from tire cord particles" (column 5, lines 5-9).

Weinberg et al. does not disclose a base layer combination of butadiene rubber granules and peelings or buffings and a first binder. *Weinberg et al.* discloses a base layer composed of

comminuted scrap rubber, and a wear layer composed of rubber buffings. According to *Weinberg et al.*, rubber buffings are not mixed with rubber granules.

Furthermore, *Weinberg et al.* discloses that the flexible pads 15, 16, 17 are not intended to be porous; water is not intended to seep down to the ballast. To the contrary, *Weinberg et al.* intends to avoid a prior limitation of railway crossings where water would “seep down into the ballast through cracks in crossing surface and along the rails and will tend to further erode the ballast” (column 1, lines 42-47). *Weinberg et al.* discloses the invention solves this problem by preventing surface water from seeping down to the ballast (column 3, lines 63-68).

Weinberg et al. does not show, teach, or contemplate a mixture of butadiene rubber granules with rubber peelings or buffings. *Weinberg et al.* teaches away from this mixture because *Weinberg et al.* teaches a non-permeable surface of scrap or finely divided rubber in a curable liquid resin composition. This is not a composition of rubber granules and rubber peelings or buffings. The mixture of butadiene rubber with rubber peelings or buffings of the present invention could not be derived by experimentation with *Weinberg et al.*’s flexible pads.

Crivelli (US 5,468,539) is directed to a precast surface overlay containing recycled tire rubber and other rubber scrap for walkways, driveways, and the like. The precast surface is composed of white rubber and black rubber scrap 11, combined with fine clay particles 13 and an EPDM binder 19 (column 2, line 43-56). The white and black rubber scraps are combined because the combination “liven[s] the appearance of the final product while maintaining such properties as resilience, dimensional stability, and wear resistance” (column 3, line 6-9). Before the components are combined, the rubber scrap is milled into coarse crumbs (column 3, line 60). In all embodiments of *Crivelli*’s precast surface, mixing rubber scrap crumbs with rubber peelings or buffings is not contemplated.

Crivelli does not show, teach, or contemplate a mixture of butadiene rubber with rubber peelings or buffings. The mixture of butadiene rubber with rubber peelings or buffings of the present invention could not be derived from experimentation with *Crivelli*'s precast surface.

Neither *Weinberg et al.* or *Crivelli* disclose varying a combination of butadiene rubber granules and peelings or buffings in the combination to increase or decrease the porosity of a base layer of a sidewalk. Even if these references could be properly combined, such a combination would still not show the present invention.

Additionally, the present invention could not be derived from experimenting with the materials disclosed in *Weinberg et al.* or *Crivelli*. It simply would not be obvious to a person of ordinary skill in the art at the time the invention was made to develop a structure for use as a sidewalk by combining the materials utilized in a railroad crossing (*Weinberg et al.*) with a precast overlay surface (*Crivelli*). Neither *Weinberg et al.* or *Crivelli* are directed to a composition with the properties of being porous, yet firm enough for a sidewalk.

Claims 4 and 5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the European Patent, in view of *Kakimoto* (US 6,602,586) or *Mickey* (US Pub. No. 2003/0091831), and as unpatentable over *Blythe* in view of *Byrne*, *Kakimoto* or *Mickey*. Applicant respectfully traverses.

Claim 4 depends from and further limits claim 1, and is allowable for at least the same reasons given above for claim 1.

As for claim 5, neither the European Patent, *Kakimoto*, *Mickey*, *Blythe*, or *Byrne*, show, teach, or contemplate a ratio of the first binder to butadiene rubber in the base layer that is 16% by weight as recited in Claim 5. This particular ratio was determined through considerable effort for the purpose of forming a sidewalk that is both porous and firm. None of the above-identified

disclosures are concerned with a sidewalk, let alone a sidewalk that is poured in place to be both firm and porous. Experimentation with the disclosed structures of the above-identified references would not provide the claimed invention.

Applicant respectfully requests that this rejection be withdrawn.

Claim 7 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the European Patent, in view of *Byrne*, and as unpatentable over *Blythe* in view of *Byrne*. Applicant respectfully traverses.

None of the above-mentioned disclosures show, teach, or contemplate butadiene rubber granules in the range of 1.5 mm to 6 mm in diameter, inclusive as recited in claim 7. This diameter was determined through considerable effort, for the purpose of providing a pourable, porous, yet firm, sidewalk.

Applicant respectfully requests that this rejection be withdrawn.

Claims 10-12 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the European Patent, and as being unpatentable over *Blythe* in view of *Byrne*. Applicant respectfully traverses.

The European Patent does not disclose any particular combination or proportion of “Gummigranulat” and “Gummiabfällen.” As discussed above, the European Patent, does not state any preference for a combination of rubber granules, rubber waste, old rubber, or new rubber. The European Patent is directed to compressing all material into hardened sheets (pages 3-7) to produce something other than a porous surface. The European Patent does not show, teach, or contemplate a combination of granules and peelings or buffings at a ratio of 70% granules and 30% peelings or buffings because it is not concerned with making a poured in place, porous, yet firm, sidewalk.

Blythe does not disclose a combination of butadiene rubber granules and peelings or buffings. Therefore, the present invention's ratio of 70% granules and 30% peelings or buffings could not be derived from the composition disclosed in *Blythe*.

Byrne discloses no particular combination of rubber granules and rubber buffings in its mulch pad. *Byrne* discloses that "some" rubber buffings are utilized when the rubber is ground from used tires (column 4, line 21). *Byrne* is not concerned with a specific combination of rubber granules and rubber buffings. Instead, a solids-to-voids ratio of 1 to 1 is disclosed, as well as adjusting this ratio by adjusting the particle size (column 4, lines 53-68). Because *Byrne* does not show, teach, or contemplate a particular combination of rubber granules and rubber buffings, a ratio of 70% granules and 30% peelings or buffings could not be developed through experimentation with *Byrne*'s disclosed structure.

Additionally, the 70% granules and 30% peelings and buffings ratio could not be surmised from *Byrne*'s mulch pad. The ratio is defined to provide porosity and firmness as required in materials utilized in a sidewalk. A person of ordinary skill in the art at the time of the present invention could not derive this ratio from the flexible mulch pad of *Byrne*.

Neither the European Patent, *Blythe*, or *Byrne* disclose a particular combination of butadiene rubber granules with peelings or buffings. Experimentation with the disclosures of the European Patent, *Blythe*, or *Byrne*, could not produce the claimed invention. Even if a combination of these references were appropriate, the combination does not show the present invention.

Claim 11 depends from claim 1 and is patentable for the same reasons stated above for the patentability of claim 1.

Claim 12 depends from and further limits claim 1, and is patentable for at least the same reasons given above for the patentability of claim 1, 10 and claim 11.

Applicant respectfully requests that this rejection be withdrawn.

Claims 13 and 14 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the European Patent, and as being unpatentable over *Blythe* in view of *Byrne*. Applicant respectfully traverses.

None of the above-mentioned disclosures show, teach, or contemplate a base layer one and one-half to three and one-half inches thick as recited in claim 13. This thickness was determined through considerable experimentation, for the purpose of providing a pourable, porous, yet firm, sidewalk. Claim 13 is patentable for the reasons stated above for the patentability of claim 1.

Claim 14 depends from claim 1 and is patentable at least for the reasons stated above for the patentability of claim 1 and claim 13.

Applicant respectfully requests that this rejection be withdrawn.

Claims 15-18 were rejected under 35 U.S.C. § 103(a) as being unpatentable over the European Patent, in view of *Kakimoto* or *Mickey*, and as unpatentable over *Blythe* as modified by *Byrne*, and further in view of *Kakimoto* or *Mickey*.

Claim 15 depends from and further limits claim 1, and is allowable for at least the same reasons given above for the patentability of claim 1.

As for claim 16, none of the above-mentioned disclosures show, teach, or contemplate a ratio of the second binder to EPDM of 20% by weight as recited in claim 16. This ratio was determined through considerable effort, for the purpose of providing a pourable porous, yet firm, sidewalk.

Claim 17 depends from and further limits claim 1, and is patentable for at least the same reasons given above for claim 1.

Claim 18 depends from and further limits claim 1, and is patentable for at least the same reasons given above for the patentability of claim 1.

Applicant respectfully requests that this rejection be withdrawn.

Claim 19 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the European Patent in view of *Schuurink* (US 4,205,102), and as unpatentable over *Blythe* as modified by *Byrne*, and further in view of *Schuurink*. Applicant respectfully traverses.

Claim 19 depends from and further limits claim 1, and is allowable for at least the same reasons given above for the patentability of claim 1.

Applicant respectfully requests that this rejection be withdrawn.

Claim 20 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the European Patent as modified by *Schuurink*, and further in view of *Byrne*, and as unpatentable over *Blythe* as modified by *Byrne*, and further in view of *Schuurink*. Applicant respectfully traverses.

Claim 20 depends from and further defines claim 1, and is patentable for at least the same reasons given above for the patentability of claim 1.

Applicant respectfully requests that this rejection be withdrawn.

Claim 21 was rejected under 35 U.S.C. § 103(a) as being unpatentable over the European Patent, and as unpatentable over *Blythe* as modified by *Byrne*. Applicant respectfully traverses.

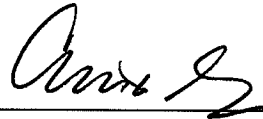
None of the above-mentioned disclosures show, teach, or contemplate a base layer of two to three inches thick and a wear layer of three-eighths to one-half inch thick as recited in claim 21. These dimensions were determined through considerable effort, for the purpose of providing a pourable, porous, yet firm, sidewalk.

Applicant respectfully requests that this rejection be withdrawn.

In light of the above amendments and remarks, applicant respectfully submits that all the claims remaining in the application are allowable, and respectfully requests that all the claims be allowed, and this application be passed to issue.

Respectfully submitted,

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